



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,841	02/08/2006	Francisc Dalmases	DE030284	7341
24737 7590 03/24/2010 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER				
NGUYEN, LEON VIET Q				
ART UNIT		PAPER NUMBER		
2611				
MAIL DATE		DELIVERY MODE		
03/24/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/567,841

**Applicant(s)**

DALMASES ET AL.

**Examiner**

LEON-VIET Q. NGUYEN

**Art Unit**

2611

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/1/10 has been entered.

***Response to Arguments***

2. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 1, it is unclear what the different spreading codes are assigned to.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2. Claims 1 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walton et al (US20030081538) in view of Rice (US20020172260) and Belaiche (US20020006156).**

Re claim 1, Walton teaches a method for encrypting a digital data stream in a transmission system that uses orthogonal codes for the modulation (§0039), the method comprising:

constructing a  $k^{\text{th}}$  connection for a  $k^{\text{th}}$  digital data stream ( $d_1(k)$  in fig. 3) by a  $k^{\text{th}}$  transmitter (220a in fig. 2),

mixing the digital data stream of the transmitter (312a-312m in fig. 3) with a spreading code that is assigned to this  $k^{\text{th}}$  connection ( $c_1(0) - c_1(M-1)$  in fig. 3),

assigning different spreading codes from a defined set of spreading codes (§0010, §0038),

producing a transmission signal is produced through the mixing ( $s_1(n,k)$  in fig. 3, §0044),

establishing a hop interval for the  $k^{\text{th}}$  connection (§0121), and

transmitting the transmission signal (fig. 3, §0055) and a representation of said hop interval by said transmitter in said  $k^{\text{th}}$  connection (§0121).

Walton fails to teach wherein the spreading codes are produced decentrally. However Rice teaches a transmitter (fig. 9) which assigns spreading codes which are externally generated (§0107). Externally generated is interpreted to be the same as decentralized.

Therefore taking the combined teachings of Walton and Rice as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the steps of Rice into the method of Walton. The motivation to combine Walton and Rice would be to ensure privacy (§0106 of Rice).

Walton also fails to teach increasing the degree of encryption of the  $k^{\text{th}}$  digital data stream during the  $k^{\text{th}}$  connection by allocating a sequence for the application of the different spreading codes and defining the sequence for the application of the content of a set of spreading codes with a permutation function indicating a permutation sequence of an order in which each individual spreading code of the assigned different spreading codes is applied in said mixing.

However Belaiche teaches by allocating a sequence for the application of the different spreading codes (§0163, the selection of spreading codes to be assigned is carried out in a function of an order number) and defining the sequence for the application of the content of a set of spreading codes with a permutation function (§0070) indicating a permutation sequence of an order in which each individual

spreading code of the assigned different spreading codes is applied in said mixing (¶0070, selection and assignment are repeated after a permutation).

Therefore taking the combined teachings of Walton and Belaiche as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the steps of Belaiche into the method of Walton. The motivation to combine Walton and Belaiche would be to reduce near far effect (¶0061 of Belaiche).

Re claim 10, the modified invention of Walton teaches a method wherein a number of different spreading codes from said defined set of spreading codes is an integer N (¶0038 of Walton), where N is greater than or equal to 2 and is less than or equal to a total number of codes in said defined set (¶0038 of Walton).

Re claim 11, the modified invention of Walton teaches a method wherein said transmitting further includes transmitting the assigned different spreading codes from the defined set of spreading codes (¶0040 of Walton).

Re claim 12, the modified invention of Walton fails to explicitly teach a method wherein said transmitting further includes transmitting an identifier representative of each assigned different spreading code from the defined set of spreading codes.

However it is necessary for a receiver to have knowledge of the spreading codes used in the transmitter to properly despread the received signals. Therefore it would be obvious and necessary to transmit information pertaining to the assigned spreading codes.

Re claim 13, it would be necessary to transmit an identifier representative of the permutation function so that the receiver has knowledge of the spreading codes to ensure proper despreading of the received signals.

**3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walton et al (US20030081538), Rice (US20020172260) and Belaiche (US20020006156) in view of Emi (US5541954).**

Re claim 14, the modified invention of Walton fails to teach a method wherein said transmitting further includes transmitting the hop interval in terms of a quantity of data packets for which each spreading code is employed in said mixing.

However Emi teaches transmitting the hop interval in terms of a quantity of data packets (col. 4 lines 49-58) for which each spreading code is employed in said mixing (col. 2 lines 12-19).

Therefore taking the combined teachings of Walton, Rice and Belaiche with Emi as a whole, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the steps of Emi into the method of Walton, Rice, and Belaiche. The motivation to combine Walton, Rice, Emi and Belaiche would be to improve transmission efficiency, transmission rate, and communication quality (col. 4 lines 39-44 of Emi).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEON-VIET Q. NGUYEN whose telephone number is (571)270-1185. The examiner can normally be reached on Monday-Friday, alternate Friday off, 7:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Application/Control Number: 10/567,841  
Art Unit: 2611

Page 8

/Leon-Viet Q Nguyen/  
Examiner, Art Unit 2611

/David C. Payne/

Supervisory Patent Examiner, Art Unit 2611